

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): A method for controlling the rotational speed of a variable speed turbogenerator operating in stand-alone mode to account for a present operating load on said variable speed turbogenerator and a transient reserve capability, comprising the steps of:

receiving a base speed set point for said variable speed turbogenerator;

determining a speed offset comprising an adjustment to said base speed set point required to accommodate the present operating load and the transient reserve capability;

determining an adjusted speed set point by combining said speed offset with said base speed set point; and

setting the rotational speed of said variable speed turbogenerator to said adjusted speed set point.

Claim 2 (canceled)

Claim 3 (currently amended): A method for controlling the rotational speed of a turbogenerator operating in stand-alone mode to account for a present operating load on said turbogenerator and a transient reserve capability, comprising the steps of:

receiving a base speed set point for said turbogenerator;

determining a speed offset comprising an adjustment to said base speed set point required to accommodate the present operating load and the transient reserve capability;

determining an adjusted speed set point by combining said speed offset with said base speed set point; and

setting the rotational speed of said turbogenerator to said adjusted speed set point.

~~The method of claim 1,~~ wherein said base speed set point comprises a baseline speed setting for said turbogenerator calculated based on ambient conditions of said turbogenerator.

Claim 4 (currently amended): A method for controlling the rotational speed of a turbogenerator operating in stand-alone mode to account for a present operating load on said turbogenerator and a transient reserve capability, comprising the steps of:

receiving a base speed set point for said turbogenerator;  
determining a speed offset comprising an adjustment to said base speed set point required to accommodate the present operating load and the transient reserve capability;  
determining an adjusted speed set point by combining said speed offset with said base speed set point; and  
setting the rotational speed of said turbogenerator to said adjusted speed set point.

~~The method of claim 1,~~ wherein determining said speed offset comprises the steps of:

receiving a sensor feedback signal indicating the present operating load of said turbogenerator;  
determining the transient reserve capability of the turbogenerator based on the present operating load and the operational limits; and  
consulting a look-up table.

Claim 5 (currently amended): A method for controlling the rotational speed of a turbogenerator operating in stand-alone mode to account for a present operating load on said turbogenerator and a transient reserve capability, comprising the steps of:

receiving a base speed set point for said turbogenerator;  
determining a speed offset comprising an adjustment to said base speed set point required to accommodate the present operating load and the transient reserve capability;  
determining an adjusted speed set point by combining said speed offset with said base speed set point; and

setting the rotational speed of said turbogenerator to said adjusted speed set point.

~~The method of claim 1,~~ wherein determining said speed offset comprises the steps of:

receiving a sensor feedback signal indicating the present operating load of said turbogenerator;  
determining the transient reserve capability of the turbogenerator based on the present operating load and operational limits; and

calculating said speed offset using at least one mathematical function.

Claim 6 (currently amended): A method for controlling the rotational speed of a turbogenerator operating in stand-alone mode to account for a present operating load on said turbogenerator and a transient reserve capability, comprising the steps of:

receiving a base speed set point for said turbogenerator;

determining a speed offset comprising an adjustment to said base speed set point required to accommodate the present operating load and the transient reserve capability;

determining an adjusted speed set point by combining said speed offset with said base speed set point;

~~The method of claim 1, further comprising the step of filtering the adjusted speed set point using an engine dynamics filter; and~~

~~wherein the step of setting the rotational speed of the turbogenerator comprises setting the rotational speed to~~ setting the rotational speed of said turbogenerator to the filtered speed set point

Claim 7 (original): The method of claim 6, further comprising the step of trimming the filtered speed set point.

Claim 8 (original): The method of claim 7, wherein trimming the filtered speed set point prevents said turbogenerator from exceeding operational limits.

Claim 9 (original): The method of claim 7, wherein trimming the filtered speed set point optimizes the operation of the turbogenerator to increase efficiency.

Claim 10 (original): The method of claim 7, wherein trimming the filtered speed set point preserves a reserve temperature margin to account for transient reserve loads.

Claim 11 (original): The method of claim 7, wherein trimming the filtered speed set point comprises:

calculating a trim signal based on a sensor feedback signal that indicates an operating parameter selected from the group consisting of speed, load, temperature, and pressure; and  
combining the trim signal with the filtered speed set point.

Claim 12 (currently amended): The method of claim 0, further comprising the step of trimming the adjusted speed set point; and

wherein the step of setting the rotational speed of the variable speed turbogenerator comprises setting the rotational speed to the trimmed speed set point.

Claim 13 (currently amended): A method for controlling the rotational speed of a turbogenerator operating in stand-alone mode to account for a present operating load on said turbogenerator and a transient reserve capability, comprising the steps of:

receiving a base speed set point for said turbogenerator;

determining a speed offset comprising an adjustment to said base speed set point required to accommodate the present operating load and the transient reserve capability;

determining an adjusted speed set point by combining said speed offset with said base speed set point;

trimming the adjusted speed set point ~~The method of claim 12~~, wherein trimming said adjusted speed set point preserves a reserve temperature margin to account for the transient reserve capability.

Claim 14 (currently amended): The method of claim 12, wherein trimming the adjusted speed set point prevents said variable speed turbogenerator from exceeding operational limits.

Claim 15 (currently amended): The method of claim 12, wherein trimming the adjusted speed set point optimizes the operation of the variable speed turbogenerator to increase efficiency.

Claim 16 (original): The method of claim 12, wherein trimming said adjusted speed set point comprises:

calculating a trim signal based on a sensor feedback signal that indicates an operating parameter selected from the group consisting of speed, load, temperature, and pressure; and combining the trim signal with the adjusted speed set point.

Claim 17 (currently amended): The method of claim 1, wherein setting the rotational speed of said variable speed turbogenerator comprises:

determining a speed command error by subtracting the actual rotational speed of said variable speed turbogenerator from said adjusted speed set point; and inputting said speed command error to a speed control algorithm for controlling a flow control valve.

Claim 18 (currently amended): A method for controlling the rotational speed of a variable speed turbogenerator operating in stand-alone mode to account for a present operating load and a transient reserve capability, comprising the steps of:

receiving a base speed set point for said variable speed turbogenerator;  
determining a speed offset comprising an adjustment to said base speed set point required to accommodate said present operating load and said transient reserve capability;  
determining an adjusted speed set point by combining said speed offset with said base speed set point;  
trimming the adjusted speed set point; and  
setting the rotational speed of said variable speed turbogenerator to the trimmed speed set point.

Claim 19 (canceled)

Claim 20 (currently amended): A method for controlling the rotational speed of a turbogenerator operating in stand-alone mode to account for a present operating load and a transient reserve capability, comprising the steps of:

receiving a base speed set point for said turbogenerator;

determining a speed offset comprising an adjustment to said base speed set point required to accommodate said present operating load and said transient reserve capability;

determining an adjusted speed set point by combining said speed offset with said base speed set point;

trimming the adjusted speed set point; and

setting the rotational speed of said turbogenerator to the trimmed speed set point,

~~The method of claim 18~~, wherein said base speed set point comprises a baseline speed setting for said turbogenerator based on ambient conditions of said turbogenerator.

Claim 21 (currently amended): A method for controlling the rotational speed of a turbogenerator operating in stand-alone mode to account for a present operating load and a transient reserve capability, comprising the steps of:

receiving a base speed set point for said turbogenerator;

determining a speed offset comprising an adjustment to said base speed set point required to accommodate said present operating load and said transient reserve capability;

determining an adjusted speed set point by combining said speed offset with said base speed set point;

trimming the adjusted speed set point; and

setting the rotational speed of said turbogenerator to the trimmed speed set point,

~~The method of claim 18~~, wherein determining said speed offset comprises the steps of:

receiving a sensor feedback signal indicating the present operating load of said turbogenerator;

determining the transient reserve capability of the turbogenerator based on the present operating load; and

consulting a look-up table.

Claim 22 (original): The method of claim 18, wherein trimming said adjusted speed set point comprises:

calculating a trim signal based on a sensor feedback signal that indicates an operating parameter selected from the group consisting of speed, load, temperature, and pressure; and

combining the trim signal with the adjusted speed set point.

Claim 23 (currently amended): The method of claim 18, wherein trimming said adjusted speed set point prevents said variable speed turbogenerator from exceeding operational limits.

Claim 24 (currently amended): The method of claim 18, wherein trimming said adjusted speed set point optimizes the operation of the variable speed turbogenerator to increase efficiency.

Claim 25 (currently amended): A method for controlling the rotational speed of a turbogenerator operating in stand-alone mode to account for a present operating load and a transient reserve capability, comprising the steps of:

receiving a base speed set point for said turbogenerator;

determining a speed offset comprising an adjustment to said base speed set point required to accommodate said present operating load and said transient reserve capability;

determining an adjusted speed set point by combining said speed offset with said base speed set point;

trimming the adjusted speed set point; and

setting the rotational speed of said turbogenerator to the trimmed speed set point.

~~The method of claim 18,~~ wherein trimming said adjusted speed set point preserves a reserve temperature margin to account for said transient reserve capability.

Claim 26 (currently amended): A method for controlling the rotational speed of a turbogenerator operating in stand-alone mode to account for a present operating load and a transient reserve capability, comprising the steps of:

receiving a base speed set point for said turbogenerator;

determining a speed offset comprising an adjustment to said base speed set point required to accommodate said present operating load and said transient reserve capability;

determining an adjusted speed set point by combining said speed offset with said base speed set point;

trimming the adjusted speed set point;

setting the rotational speed of said turbogenerator to the trimmed speed set point, and

~~The method of claim 18, further comprising the step of filtering said adjusted speed set~~  
point with an engine dynamics filter prior to trimming.

Claim 27 (currently amended): The method of claim 18, wherein setting the rotational speed of said variable speed turbogenerator comprises:

determining a speed command error by subtracting the actual rotational speed of said variable speed turbogenerator from said trimmed speed set point; and

inputting said speed command error to a speed control algorithm for controlling a flow control valve.

Claims 28-40 (canceled)